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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/690,110

10/21/2003

Mario Wanninger

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5357

7590 05/31/2007
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EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

05/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/690,110

Applicant(s)

WANNINGER, MARIO

Examiner

Timothy L. Rude

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6 and 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims

2. Claims 1, 13, and 14 are amended. Claim 7 is canceled by Applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

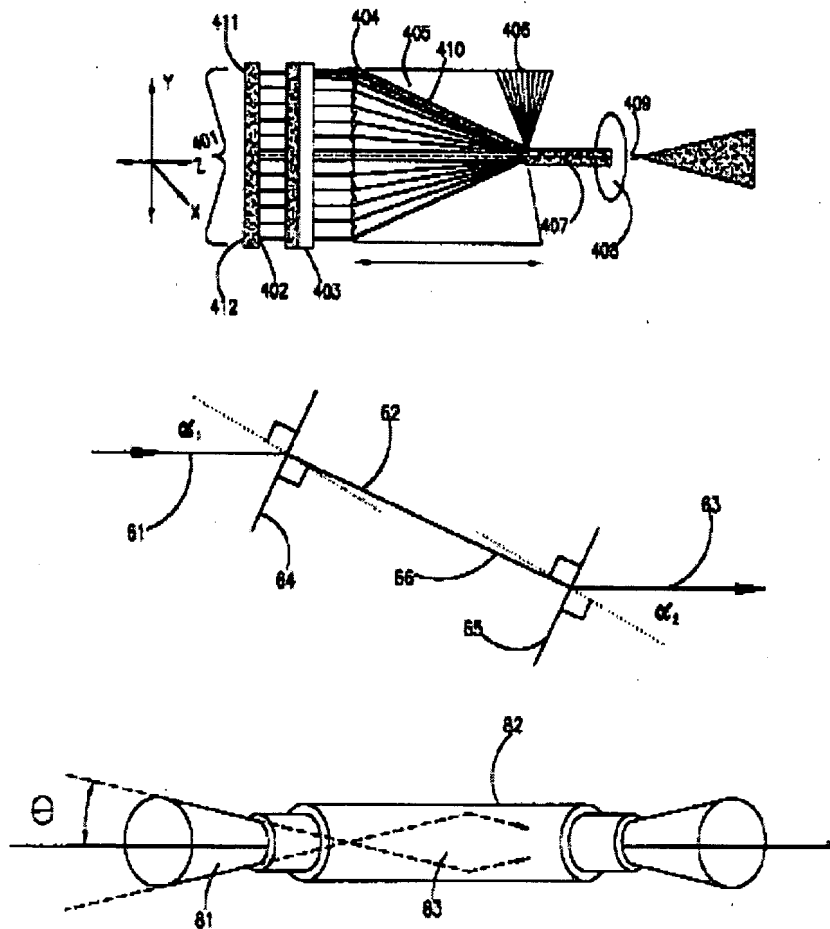
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6, 8-11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuberger et al (Neuberger) USPAT 6,005,717 in view of Ota et al (Ota) USPAT 6,950,573 B2, and further in view of Ullman et al (Ullman) USPAT 6,771,686 B1.

As to claims 1, 4, 8, 11, and 14, Neuberger discloses a coupling-in device for light from a plurality of light sources into an optical waveguide, wherein the coupling-in device has a plurality of focussing optics, 404, for the light from the various light sources [abstract, entire patent], wherein the optical waveguide has a coupling-in area (curve

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shaped end of fiber below 405), which is likewise formed (Applicant's curved) in focussing fashion.

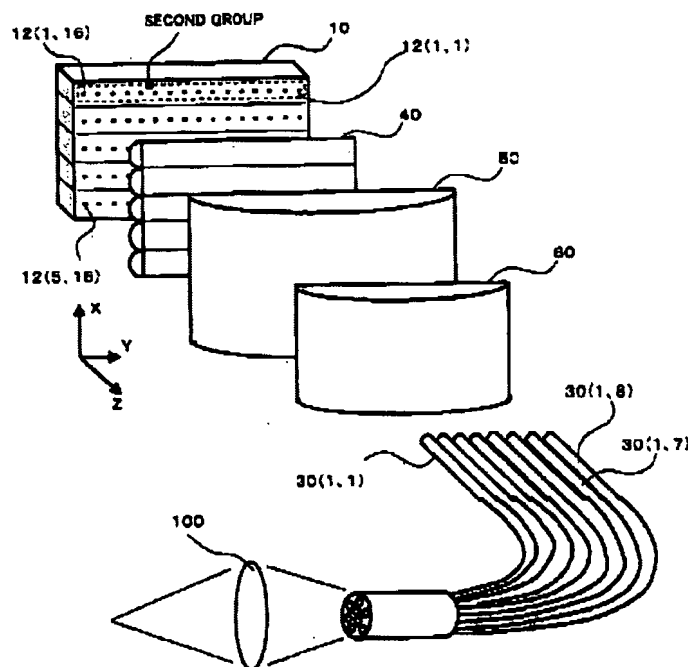


Neuberger discloses the coupling-in device (claim 4) wherein the geometry of the coupling-in area and the arrangement of the focussing optics are co-ordinated with the respective light source and the diameter of the optical waveguide [inherent to perform properly, please note co-ordinated does not ensure perfect co-ordination].

Neuberger does not explicitly disclose 1) a device wherein all of the light is coupled in via a coupling-in area that constitutes a single curved region that covers the entire end of the optical waveguide or 2) a device wherein the focussing optics and the coupling-in area are produced in one piece (thereby resulting in a resulting in a coupling-in area surrounded by a frame in which the focusing optics are integrated).

Ota teaches 1) the use of a device [Figure 1 and col. 2, lines 32-40] having a single curved region, 60, to provide more efficient coupling with better reduction to practice (easier to manufacture).

FIG. 1



Ota is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add a coupling-in area that constitutes a single curved

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region that covers the entire end of the optical waveguide to provide more efficient coupling with better reduction to practice (easier to manufacture).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Neuberger with the a coupling-in area that constitutes a single curved region that covers the entire end of the optical waveguide to provide a device that is more efficient while being easier to manufacture.

Ullman teaches 2) that correction optics may be formed in a number of ways to include one piece or monolithically [col. 2, lines 40-52] to eliminate nonconformities to thereby improve focus quality.

Ullman is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add one piece or monolithically formed optical compensation unit to eliminate nonconformities to thereby improve focus quality.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Neuberger with a one piece or monolithically formed optical compensation unit of Ullman to eliminate nonconformities to thereby improve focus quality.

Please note that examiner considers the teaching of Ullman to render the following recitations wherein said coupling-in device is produced from transparent plastic in an injection moulding method (claim 8), wherein the coupling-in device is provided with a stem (claim 11), and wherein the diameter of the stem corresponds to the diameter of an optical waveguide which is attached to the stem obvious to one of

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ordinary skill in the art given the teaching to form the optics monolithically, e.g., clear plastic injection molded with stem to mate with fiber optic.

Please also note that the modification of Neuberger in view of Ota with the invention of Ullman would obviously necessitate some sort of frame (part of the one piece or monolithically formed optical unit) to support the integrated focusing optics in proper alignment with the single curved region of Ota, lest the device fall apart. Examiner considers the formation of some sort of frame to hold the optical components together in proper alignment to be an obvious result of successfully implementing a modification of Neuberger in view of Ota into a monolithically formed optical compensation unit per the teachings of Ullman.

As to claim 2, Neuberger discloses the coupling-in device as claimed in claim 1, wherein a focussing optic is formed for each light source.

As to claim 6, Neuberger discloses the coupling-in device as claimed in claim 4, wherein the focussing optics are spaced apart from the coupling-in area.

As to claim 9, Neuberger discloses the coupling-in device as claimed in claim 1, wherein LEDs [laser diodes, Abstract] arranged directly on the focussing optics are used as light sources.

As to claim 10, Neuberger discloses the coupling-in device as claimed in claim 1, wherein the geometry of the coupling-in device and the arrangement of the light sources are co-ordinated with one another in such a way as to minimize the losses occurring between emission of the light and entry into the actual optical waveguide [inherent to perform properly, please note co-ordinated does not ensure perfect co-ordination and minimize does not ensure total minimization].

5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuberger in view of Ota, as applied to claim 1 above, and further in view of Tulip USPAT 5,386,431.

As to claims 12-13. Neuberger in view of Ota disclose the coupling-in device as claimed in claim 1.

Neuberger does not explicitly disclose a device wherein the coupling-in area and/or focusing optics are arranged in circle-like fashion and wherein the coupling-in area and/or focusing optics are arranged around the end of the stem.

Tulip teaches that the laser array may be a cylindrical array [Applicant's around the end of the stem; col. 9, lines 1-17] to achieve a co-phasal laser array with high power [col. 1, line 40 through col. 2, line 8].

Tulip is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add coupling-in area and/or focusing optics are arranged in

circle-like fashion and wherein the coupling-in area and/or focusing optics are arranged around the end of the stem to achieve a co-phasal laser array with high power.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Neuberger with the coupling-in area and/or focusing optics are arranged in circle-like fashion and wherein the coupling-in area and/or focusing optics are arranged around the end of the stem of Tulip to achieve a co-phasal laser array with high power.

Response to Arguments

Applicant's arguments filed on 26 January 2007 have been fully considered but they are not persuasive.

Applicant's ONLY substantive arguments are as follows:

(1) Regarding base claim 1, there is no motivation to combine Ota because Ota has the same function as Neuberger.

(2) Regarding base claim 1, Ullman does not teach or suggest the claimed one piece structure.

(3) Dependent claims are allowable because they directly or indirectly depend from an allowable base claim.

Examiner's responses to Applicant's ONLY arguments are as follows:

(1) It is respectfully pointed out that the improvement of the same function of Neuberger that is taught by Ota is the use of a device [Figure 1 and col. 2, lines 32-40] having a single curved region, 60, to provide more efficient coupling with better reduction to practice (easier to manufacture) per rejections above.

(2) It is respectfully pointed out that Ullman teaches that it is desirable to form optical assemblies as a one piece or monolithically formed optical unit to eliminate nonconformities to thereby improve focus quality. The optical components are provided by the base reference Neuberger in view of Ota.

(3) It is respectfully pointed out that in so far as Applicant has not argued rejection(s) of the limitations of dependent claim(s), Applicant has acquiesced said rejection(s).

Any references cited but not applied are relevant to the instant Application.

Conclusion

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

Timothy L Rude
Examiner
Art Unit 2871



David Nelms
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